

METHOD AND APPARATUS FOR PROVIDING RANDOM ACCESS DETECTION IN A COMMUNICATION SYSTEM

ABSTRACT OF THE DISCLOSURE

5 The disclosed embodiments relate to a communication system and method. The system may comprise a pre-whitening device that applies pre-whitening data to a received signal from an antenna array to produce a pre-whitened signal, at least one detector that is adapted to recognize a pattern corresponding to a request for access in the pre-whitened signal and compute correlation data corresponding to the pattern,
10 and a threshold detector that determines whether the correlation data exceeds a threshold and indicates that an acknowledgement signal should be transmitted if the threshold is exceeded. The method may comprise the acts of creating a pre-whitened signal by applying pre-whitening data to a received signal, detecting a pattern that corresponds to a request for access in the pre-whitened signal, computing correlation
15 data corresponding to the pattern, determining whether the correlation data exceeds a threshold, and indicating that an acknowledgement signal should be transmitted if the threshold is exceeded.